Spectrum® 1000

Issued April 2008 • Index No. PC/8.0

Air Plasma Cutting and Gouging

Quick Specs

Industrial Applications
Heavy Fabrication
Manufacturing

Processes
Air Plasma Cutting and Gouging

Rated Output
100% Duty Cycle (see page 2)
3-Phase: 80 A at 150 VDC,
60% Duty Cycle (230–575 V)
50% Duty Cycle (208 V)
1-Phase: 80 A at 150 VDC,
40% Duty Cycle (230 V)
30% Duty Cycle (208 V)

Cutting Capability
Rated: 1 in (25.4 mm)
Sever: 1-1/2 in (38.1 mm)

Weight
With torch: 92 lb (41.7 kg)

Required Input Pressure/Flow
7.8 SCFM (222 L/min) at
90 PSI MIN (621 kPa)
120 PSI MAX (828 kPa)

The Power of Blue®

Auto-Line™ automatically connects unit to any primary input voltage from 208 to 575 volts single- or three-phase, 50 or 60 Hz.

LVC™ **line voltage compensation** provides peak performance power under variable input voltage conditions (176–630 V) for steady cuts and cleaner ending cuts.

Auto-Refire™ **Technology** provides ultimate customer convenience by automatically controlling the pilot arc when cutting expanded metal or multiple pieces of metal. The pilot arc will switch in and out as fast as needed when cutting expanded metal and provides maximum power for cutting thicker metal—all automatically! No need for manual re-triggering which reduces user hand fatigue.

Consumables storage compartment provides convenient access to consumables and parts.

Wind Tunnel Technology™ prevents abrasive dust and particles from damaging internal components. Also, the **Fan-On-Demand**™ cooling system only operates when needed, reducing the amount of airborne dust/dirt pulled through the unit.

Superior gouging capability provides an extremely long gouging arc for those hard-to-reach, heavy applications. Plasma arc gouging produces less dust, smoke and other harmful environmental hazards compared to carbon arc gouging.

CNC/Robotic machine interface is standard on all units, allowing automated control and rapid changeover to mechanized operation.

Portable powerful package that cuts up to 1-1/2 in (38 mm) but weighs only 92 lb (41.7 kg).

Starts without high-frequency so it will not interfere with or damage controls or computers.

Spectrum Plasma Cutters offer reliability and performance that others can't match! See more at MillerWelds.com/reliable

Comes Complete With:
- ICE-80T hand-held torch with 25 ft (7.6 m) or 50 ft (15.2 m) cable, or ICE-80TM machine-held torch with 25 ft (7.6 m) or 50 ft (15.2 m) cable. Extra consumables supplied
- Heavy-duty work clamp with 25 ft (7.6 m) or 50 ft (15.2 m) cable
- 10 ft (3 m) power cord
- CNC/Robotic remote cable kit (included w/machine-held torch pkg)

Postflow cooling circuit cools the consumables and torch with postflow air after you release the trigger. This feature extends life of torch and consumables.

Patented Ultra-Quick Connect™ **torch** offers the fastest plasma torch connection and removal in the industry.

Miller's rugged **ICE-80T torch** provides an increased rated cut of 1 in, longer consumable life, and a torch cable that is more resistant to burns and cuts.

The ICE-80T torch includes a **drag shield** that attaches to the cup and holds the tip 1/8 in (3.2 mm) off the workpiece. This permits the operator to drag the torch on the workpiece while cutting at full output, which increases operator comfort and makes template cutting easier.

The ICE-80T/TM utilizes the same consumables as the ICE-80CX.

TRUE BLUE® 3YR. WARRANTY

Power source is warranted for 3 years, parts and labor.
ICE torch is warranted for 1 year, parts and labor.

MADE IN USA
APPLETON, WI

Miller Electric Mfg. Co.
An Illinois Tool Works Company
1635 West Spencer Street
Appleton, WI 54914 USA

International Headquarters
Phone: 920-735-4505
USA FAX: 920-735-4134
Canadian FAX: 920-735-4169
International FAX: 920-735-4125

Web Site
www.MillerWelds.com

ISO 9001:2000 REGISTERED QUALITY SYSTEM

Distributed By: One Source Equipment Rentals www.onesourcerental.com

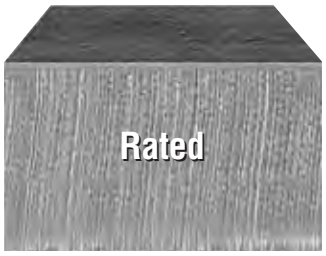
Specifications (Subject to change without notice.)

DC 3 Phase 1 Phase

Input Power	Rated Output	Duty Cycle at Input Voltage	Amps Input at Rated Output, 50/60 Hz 208 V	230 V	400 V	460 V	575 V	KVA	KW	Plasma Gas	Dimensions	Net Weight with Torch
3-phase	80 A at 150 VDC	60% (230–575 V) 50% (208 V)	41	36	21	18	14	14.6	13.7	Air or Nitrogen only	H: 17 in (432 mm) W: 12-1/2 in(318 mm) D: 20-1/2 in (521 mm)	Net: 92 lb (41.7 kg)
1-phase	80 A at 150 VDC	40% (230 V) 30% (208 V)	69	62	—	—	—	14.3	14.4			

Mild Steel Cutting Capability (Thickness to scale.)

1/2 in (12.7 mm) at 40 IPM



1 in (25.4 mm) at 10 IPM

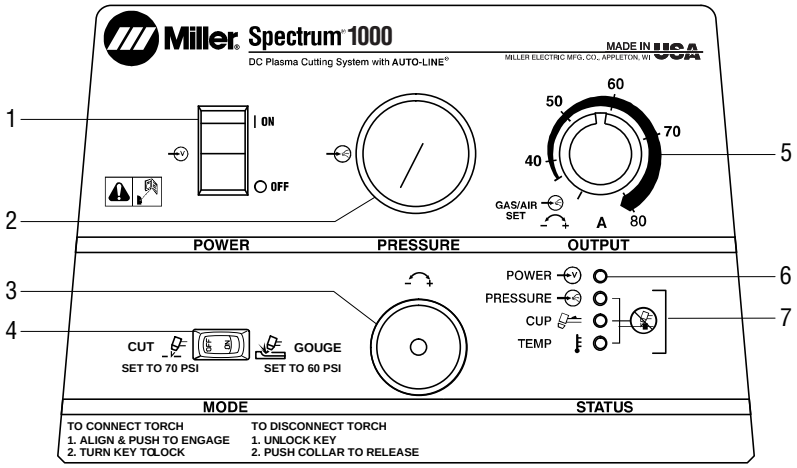
Thickness	Approximate Travel Speeds*
3/16 in (4.8 mm)	140 IPM (3556 mm/min)
1/4 in (6.4 mm)	105 IPM (2667 mm/min)
3/8 in (9.5 mm)	61 IPM (1549 mm/min)
1/2 in (12.7 mm)	40 IPM (1016 mm/min)
5/8 in (15.9 mm)	26 IPM (660 mm/min)
3/4 in (19.0 mm)	20 IPM (508 mm/min)
1 in (25.4 mm)	10 IPM (254 mm/min)

** Travel speeds are approximately 80% of maximum.*

Note: Recommended maximum piercing capacity for hand-held applications is 1/2 in (12.7 mm).
Maximum Sever cut of 1-1/2 in (38.1 mm) at 4 IPM.
For aluminum and other metals with high thermal conductivity, cutting capabilities will be derated as much as 30%.

Rated cut capacity is based on traveling approximately 10 inches per minute to achieve a steady, precise cut. This is the key rating that should meet or exceed your typical cutting thickness requirements.

Control Panel



1. Power Switch
2. Gas/Air Pressure Gauge
3. Gas/Air Pressure Control
4. Cut/Gouge Switch
5. Output Control
6. Power Light
7. Trouble Lights

Operating Data

Output for 100% Duty Cycle at 40˚ C (104˚ F)

Input	Output
208 V, 1-Phase	44 A
230 V, 1-Phase	50 A
400–575 V, 1-Phase	60 A
208 V, 3-Phase	55 A
230–575 V, 3-Phase	60 A

Distributed By:
One Source
RENTALS • SALES • SERVICE
www.onesourcerental.com

Genuine Miller Accessories

No. 30A Economy Cart with Cord Wrap #195 093
This economical running gear provides mobility with an angle for easy front panel access and extra storage space.

No. 50HD Cart #300 026
This heavy-duty cart accommodates the Spectrum 125C, 375, 625, 2050, and 1000.

Protective Cover #195 424
Water-resistant, odor-free cover protects your machine's finish.

RTI Filter and Bracket #195 425
Dryer will remove water, dirt and oil as small as one micron with 99.9% efficiency. Can be mounted on plasma cutter or on wall. Install as close as possible to point of air consumption.

Motor Guard Air Filter #042 306
The filter is equipped with a 1/4 in NPT port to match the fittings on most plasma systems; it has a rated airflow of over 45 SCFM.

Distributed By:

One Source
RENTALS • SALES • SERVICE
www.onesourcerental.com

Miller Service Parts Accessories

The following accessories must be ordered from Miller Service Parts.

RTI Replacement Filter Element #212 771
Replacement filter for **#195 425**.

Motor Guard Replacement Filter Element #042 312
Carton of four filters for use with motor guard air filter **#042 306**.

CNC/Robotic Remote Cable Kit
#195 432 with 25 ft (7.6 m) torch
#300 027 with 50 ft (15.2 m) torch
Consists of an ICE-80TM mechanized torch and cable assemblies for CNC/Robotic interface for remote start and okay-to-move functions as well as voltage-sensing. Includes remote pendant control with cable.

Remote Pendant Control #195 513
Provides remote start and stop of the arc for the ICE-80TM machine-held torch.

ICE-80T Consumable Kit #222 942
Consumable kit includes 6 standard electrodes, 3 tips (80 A), 2 ext tips (80 A), 1 gouge tip, 1 gouge shield, 1 retaining cup, 1 drag shield and 3 o-rings.

Plasma Circle-Cutting Guide #195 981
Cut straight lines or circles up to 12 inch diameter with ease.

Suction/Magnetic Pivot Base #195 979
Add this to your cutting guide for convenient attachment to all flat surfaces. The extended arm accommodates holes up to 30" diameter.

Torch Cable Covers
#231 867 25 ft (7.6 m)
#231 868 50 ft (15.2 m)

MIG Gloves
#227 821 Small
#227 822 Medium
#227 823 Large
#227 824 X-Large
For medium-duty MIG welding and metalworking tasks. Combination of durable top grain cowhide palm and abrasion-resistant pig split back sewn with Kevlar® thread.

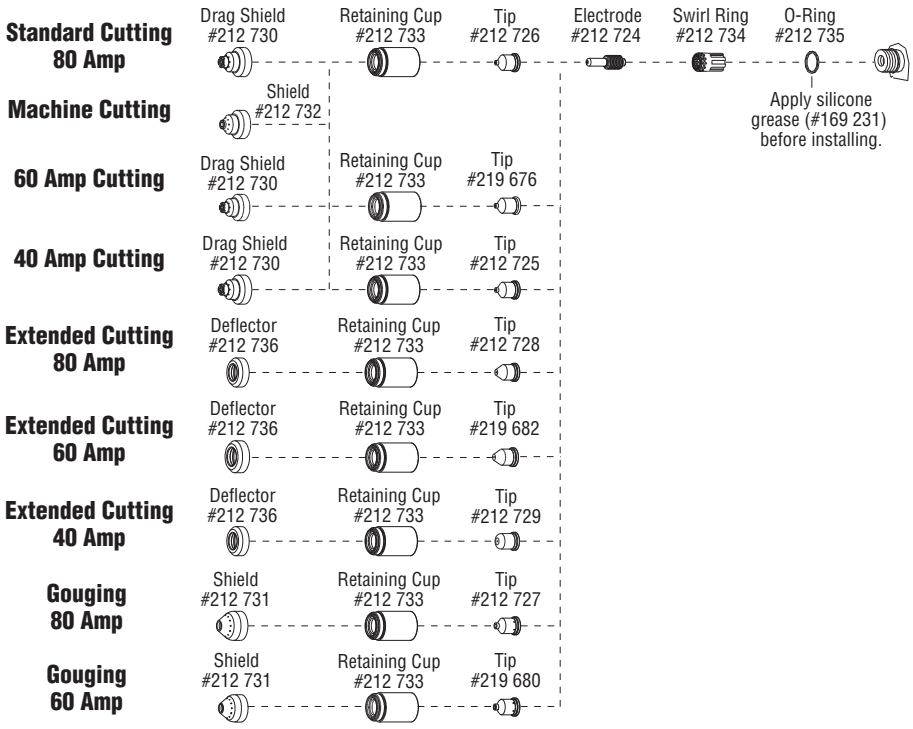
Metalworker Gloves
#227 817 Small
#227 818 Medium
#227 819 Large
#227 820 X-Large
Designed for the daily demands of the metalworker and material handler. Padded, goatskin palm with textured G-Grip™ patch for excellent grip. Neoprene wrist with Velcro® closure for improved fit. NOT intended for use while welding.

Replacement Torch and Consumables

ICE-80T Hand-Held Torch
#195 223 25 ft (7.6 m)
#195 225 50 ft (15.2 m)

The **ICE-80TM Machine-Held Torch** is also available for the Spectrum 1000.
#195 221 25 ft (7.6 m)
#223 535 50 ft (15.2 m)
Note: Call Miller Service Parts for info.

#907 162-01-3 with 25 ft (7.6 m) torch
#907 162-01-5 with 50 ft (15.2 m) torch
Packages include Spectrum 1000 power source, ICE-80TM machine-held torch, CNC/Robotic remote cable kit, and remote pendant control.



Ordering Information

Power Source and Options	Stock No.	Description	Qty.	Price
Spectrum® 1000 Single-/three-phase, 208–575 VAC, 50/60 Hz, Auto-Line™ *Note: Each Spectrum unit includes extra consumables (1 standard electrode, 1 standard tip, 1 gouge tip, 1 gouge shield, 1 extended tip, and 1 deflector).*	**#907 162-01-1*** **#907 162-01-2*** **#907 162-01-3*** **#907 162-01-5***	With 25 ft (7.6 m) ICE-80T hand-held torch With 50 ft (15.2 m) ICE-80T hand-held torch With 25 ft (7.6 m) ICE-80TM machine-held torch With 50 ft (15.2 m) ICE-80TM machine-held torch (*Machine torch package includes CNC/Robotic remote cable kit and remote pendant*)		
Replacement Torches and Consumables				
ICE-80T Hand-Held Torch	**#195 223** **#195 225**	25 ft (7.6 m). *Order from Miller Service Parts* 50 ft (15.2 m). *Order from Miller Service Parts*		
ICE-80TM Machine-Held Torch	**#195 221** **#223 535**	25 ft (7.6 m). *Order from Miller Service Parts* 50 ft (15.2 m). *Order from Miller Service Parts*		
Consumables		See above. *Order from Miller Service Parts*		
Accessories				
No. 30A Economy Cart	**#195 093**			
No. 50HD Cart	**#300 026**			
Protective Cover	**#195 424**			
RTI Filter and Bracket	**#195 425**			
RTI Filter Replacement Element	**#212 771**	For RTI filter #195 425. *Order from Miller Service Parts*		
ICE-80TM torch with CNC/Robotic Remote Cable Kit (*Includes ICE-80TM torch, cables and remote pendant control*)	**#195 432** **#300 027**	25 ft (7.6 m). *Order from Miller Service Parts* 50 ft (15.2 m). *Order from Miller Service Parts*		
Remote Pendant Control	**#195 513**	*Order from Miller Service Parts*		
ICE-80T Consumable Kit	**#222 942**	See page 3 for contents. *Order from Miller Service Parts*		
Plasma Circle-Cutting Guide	**#195 981**	*Order from Miller Service Parts*		
Suction/Magnetic Pivot Base	**#195 979**	*Order from Miller Service Parts*		
Torch Cable Covers		See page 3. *Order from Miller Service Parts*		

Date: **Total Quoted Price:**

* *Certified to both the Canadian and U.S. Standards for welding and plasma cutting equipment.*

Miller

Distributed by:

One Source
RENTALS • SALES • SERVICE
www.onesourcerental.com

Litho in USA